

# LED BEAM MOVING HEAD FL-101 36x3W

## User Manual



## 1. Preface

### 1.1 Packing list

| Product name      | quantity |
|-------------------|----------|
| moving head light | 1 pcs    |
| Power -line       | 1 base   |
| User manual       | 1 pcs    |

### 1.2 Unpacking instructions

On receiving a fixture, carefully unpack the carton, check the contents to ensure that all parts are presented, and have been received in a good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows, sign of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture should be returned in original factory box and packing.

### 1.3 AC Power

To determine the power requirements for a particular fixture, see the label affixed to the back plate of the fixture or referred to the fixtures specification chart. A fixture listed current rating is its average current draw under normal conditions. All fixtures must be directly powered off a switched circuit and cannot be run off a rheostat(variable resist) or dimmer circuit, even if the rheostat or dimmer source voltage matches the fixtures requirement. Check the fixture or device carefully to make sure that if a voltage selection switch exists that it is set to the correct line voltage you will use.

**Warning!** Verify that the voltage select switch on your unit matches the line voltage applied. Damage to your fixture may result if the line voltage applied does not match the voltage indicated on the voltage selector switch. All fixtures must be connected to circuits with a suitable Earth ground.

## 1.4 Safety instructions

Please read these instructions CV, it includes important information about the installation, usage and maintenance of this product.

Please keep this user guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.

Always make sure that you are connecting to the proper voltage, and that the line voltage you are connecting to is not higher than that stated on the decal or rear panel of the fixture.

This product is intended for indoor use only!

To prevent risk of fire or shock, do not expose fixture to rain or moisture. Make sure that there are no flammable materials close to the unit while operating.

The unit must be installed in a location with adequate ventilation, at least 20in(50cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.

Always disconnect from power source before servicing or replacing fuse and be sure to replace with same fuse size and type.

Secure fixture to fastening device using a safety chain. Never carry the fixture solely by its head. Use its carrying handles.

Maximum ambient temperature (Ta) is 104°F(40°C). Do not operate fixture at temperatures higher than this.

In the event of a serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.

Don't connect the device to a dimmer device.

Make sure the power cord never crimped or damaged.

Never disconnect the power cord by pulling or gagging on the cord.

Avoid direct eye exposure to the light source while it is on.

## 2. Technical Specification

- Extremely small, fast and powerful LED Moving Beam,
- DMX Channels: 9/12/16CH
- Pan/ Tilt: 650\*/ 240\* speed adjustable
- Smooth electronic dimming: 0-100%
- Electronic strobe with pulse and random effects
- High efficiency, low power consumption
- Super compact, low weight

Weight: 5,7kg

Voltage: 100V-240V, 50/60Hz

Fuse: T6.3A

Power Consumption: 150W

Light source: 3W LED x36 (R8, G10, B10, W8)

Dimension: 375x322x445mm

## 3. Display

To show the various menus and the selected functions

### LED

|        |          |                   |
|--------|----------|-------------------|
| DMX    | ON       | DMX Input Present |
| MASTER | ON       | Master Mode       |
| SLAVE  | ON       | Slave Mode        |
| SOUND  | Flashing | Sound Activation  |

### Button

|       |                                          |
|-------|------------------------------------------|
| MENU  | To select the programming functions      |
| DOWN  | To go backward in the selected functions |
| UP    | To go forward in the selected functions  |
| ENTER | To confirm the selected functions        |

### Mains Input

Connect to supply power.

### Mains Output

Connect to supply power to the next unit.

### DMX Input/ Output

For DMX512 link, use 3/5-pin XLR cable to link the unit together.

## 4. Main Function

To select any of the given functions, Press the MENU button up to when the required one is showing on the display. Select the function by ENTER button and the display

will blink. Use DOWN and UP buton to change the mode. Once the required mode has been selected, press the ENTER buton to setup, to go back to the functions whitout any change press the MENU buton again. Hold and press the MENU buton about one secondo or wait for one minute to exit the menu mode.

The main functions are showing below:

|      |               |         |               |
|------|---------------|---------|---------------|
| MENU | DMX Address   | 001     |               |
|      |               | 512     |               |
|      | Channel Set   | 9ch     |               |
|      |               | 12ch    |               |
|      |               | 16ch    |               |
|      | Show Mode     | Show 1  |               |
|      |               | Show 2  |               |
|      |               | Show 3  |               |
|      |               | Show 4  |               |
|      | Slave Mode    | Slave 1 |               |
|      |               | Slave 2 |               |
|      | Black Out     | Yes     |               |
|      |               | No      |               |
|      | Sound State   | On      |               |
|      |               | Off     |               |
|      | Sound Sense   | 0       |               |
|      |               | 100     |               |
|      | PAN Inverse   | Yes     |               |
|      |               | No      |               |
|      | Tilt Inverse  | Yes     |               |
|      |               | No      |               |
|      | Back Light    | On      |               |
|      |               | Off     |               |
|      | White Balance | Red     | 125           |
|      |               | Green   | ....          |
|      |               | Blue    | 255           |
|      | Menu Test     | PAN     | 0             |
|      |               | Tilt    |               |
|      |               | Red     |               |
|      |               | Green   | .....         |
|      |               | Blue    |               |
|      |               | White   | 255           |
|      |               | Dimmer  |               |
|      |               | Strobe  |               |
|      | Auto Test     |         |               |
|      | Temp.         | 31°C    |               |
|      | Defaults      | No      | Pro Defaults  |
|      |               | Yes     | Auto Defaults |

### **DMX Address**

Select DMX Address, press the ENTER button to confirm, the present address will blink on the display. Use the UP and DOWN button to adjust the address from 1 to 512. Once the address has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Channel Set**

Select Channel Set, press the ENTER button to confirm, the present set will blink on the display. Use the UP and DOWN button to select channel 9/12/16. Once the set has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Show Mode**

Select Show Mode. Press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the Show 1 or Show 2 or Show 3 or Show 4 mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Slave Mode**

Select Slave Mode, Press the Enter button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the Slave 1 (normal) or Slave 2 (2 light show) mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Black Out**

Select Slave Mode, Press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the Yes (yes blackout) or No (no blackout) mode. Once the mode has been selected, press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Sound State**

Select Sound State, Press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the ON (sound on) or Off (sound off) mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and

press the MENU button about one second or wait for one minute to exit the menu mode.

### **Sound Sense**

Select Sound Sense, Press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the 0...1000 mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Pan Inverse**

Select Pan Inverse, Press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the Yes (Pan Inversion) or No (Normal) mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Tilt Inverse**

Select Tilt Inverse, Press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the Yes (Tilt Inversion) or No (Normal) mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Back Light**

Select Back Light, Press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the On (LED On) or Off (LED Off) mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Function Delay**

Select Function Delay, press ENTER button to confirm, present mode will blink on the display. Use DOWN and UP button to select the No Delay or 1S/2S/3S Delay (Wait for 1/2/3 seconds before these Functions of 12CH are activated/ deactivated) mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **White Balance**

Select White Balance, press the ENTER button to confirm, present mode will blink on the display. Use DOWN and UP button to select the Red or Green or Blue. Once the mode has been selected, press the ENTER button to setup, use the DOWN and UP button to change the value (125~255). Once the mode has been selected, press the ENTER button to setup, go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Manu Test**

Select Manu Test, press the ENTER button to confirm, present mode will blink on the display. Use DOWN and UP button to select the Pan/Tilt/Red/Green/Blue/White/Dimmer or Strobe. Once the mode has been selected, press the ENTER button to setup, use the DOWN and UP button to change the value (0~255). Once the mode has been selected, press the ENTER button to setup, go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Auto Test**

Press the MENU button up to when the Auto-Test is blinking on the display. Pressing ENTER button and the unit will run self-test by built-in program. To go back to the functions press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Temperature**

Press the MENU button up to when the Temperature Test is blinking on the display. Pressing ENTER button and the unit will run self-test by built-in program. To go back to the functions press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### **Defaults Setting**

Press the MENU button to show Defaults on the display. Press the ENTER button and the display will blink. Use the DOWN and UP button to select the YES or No. Once the Yes has been selected, press the ENTER button and use the UP and Down button to select the PRO Defaults or AUTO Defaults.

**PRO Defaults:** For professional users, detailed explanation as followings:

- Slave Mode – Slave 1
- Black Out – Yes
- Sound State – Off
- Pan Inverse – No
- Tilt Inverse – No

- Back Light – Off
- Function Delay – 3s Delay

**Auto Defaults:** Mostly automatic mode, for non professional users, detailed explanation as followings:

- Slave Mode – Slave 1
- Black Out – No
- Sound State – On
- Pan Inverse – No
- Tilt Inverse – No
- Back Light – On

(Notice: Other settings are NOT changed while choosing Defaults Setting!).

Press the ENTER and the corresponding functions will set to defaults setting, to go back to the functions without any change press the MENU buton again. Hold and press the MENU buton about one secondo or wait for one minute to exit the menu mode.

### Reset

Press the MENU buton up to when the Rest is blinking on the display. Pressing ENTER buton and all channels of the unit will return to their standard position.

## 5. Home Position Adjust

|        |             |      |
|--------|-------------|------|
| Offset | Pan Offset  | 127  |
|        | Tilt Offset | -127 |

In the main functions, hold ENTER buton for at least 3 seconds into offset mode, use DOWN and UP buton up to chose Pan Offset or Tilt Offset, Pressing ENTER buton and the display will blink. Use Down and UP buton to adjust the home position of the Pan, Tilt, Once the opposition has been selected, press the ENTER buton to setup, to go back to the functions without any change press the MENU buton again. Hold and press the MENU buton about one secondo r wait for one minute to exit the menu mode.

## 6. How to Control The Unit

You can operate the unit in two ways:

1. Master/ Slave built-in preprogram function
2. Universal DMX controller

No need to turn the unit off when you change the DMX address, as new DMX address setting will be effect a tonce. Every time you turn the unit on, it will show

„M108RGBW” on the display and move all the motors to their „HOME” position and you may hear some noises for about 20 seconds. After that the unit will be ready to receive DMX signal or run the built in programs.

## 7. Master/ Slave Built In preprogrammed Function

By lining the units in master/ slave connection, the first unit will controll the other units to give an automatic, sound activated, synchronized light show. This function is good when you want an instant show. You have to set the first unit in master mode Show Mode and select Show 1 or Show 2 or Show 3 ors Show 4 mode. Its DMX input jack will have nothing plugged into it, and its master LED will be constantly on and sound LED will flash to the music. The other units will have to set in Slave mode and select Slave 1 (normal) or Slave 2 (2 light show) mode, Their DMX cables plugged into the DMX input jacks (daisy chain) and the slave led lights will constantly on.

### 2-light show

In Slave mode, Slave 1 means the unit works normally and Slave 2 means 2-light show. In order to create a great light show, you can set Slave 2 on the second unit to get contrast movement to each other, even if you have two units only.

## 8. DMX Controller

By using a universal DMX Controller to control the units, you will need to set DMX address from 1 to 512 so that the units can recive DMX signal.

Press the MENU buton up to when the DMX Adress is showing on the display. Pressing ENTER buton and the display will blink. Use DOWN and UP buton to change the DMX512 address. Once the address has been selected, press the ENTER buton to setup, to go back to the functions without any change press the MENU buton again. Hold and press the MENU buton about one secondo r wait for one minute to exit the menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units.

| Channel Mode | Unit 1 Address | Unit 2 Address | Unit 3 Address | Unit 4 Address |
|--------------|----------------|----------------|----------------|----------------|
| 9 channels   | 1              | 10             | 19             | 28             |
| 12 channels  | 1              | 13             | 25             | 37             |
| 16 channels  | 1              | 17             | 33             | 49             |

## 9. DMX512 Configuration

9 Channel Mode:

| Channel List | Value   | Function      |
|--------------|---------|---------------|
| CH1          | 000-255 | Pan (0-630*)  |
| CH2          | 000-255 | Tilt (0-240*) |

|     |         |                  |
|-----|---------|------------------|
| CH3 | 000-255 | Strobe           |
| CH4 | 000-255 | RED (0%-100%)    |
| CH5 | 000-255 | GREEN (0%-100%)  |
| CH6 | 000-255 | BLUE (0%-1000%)  |
| CH7 | 000-255 | WHITE (0%-100%)  |
| CH8 | 000-255 | Dimmer (0%-100%) |
| CH9 | 000-255 | Sound Active     |

12 Channel Mode:

| Channel List | Value   | Function                          |
|--------------|---------|-----------------------------------|
| CH1          | 000-255 | Strobe Effect                     |
| CH2          | 000-255 | Dimmer (0%-100%)                  |
| CH3          | 000-255 | Pan (0-630*)                      |
| CH4          | 000-255 | Pan Fine (Least significant bit)  |
| CH5          | 000-255 | Tilt (0-240*)                     |
| CH6          | 000-255 | Tilt Fine (Least significant bit) |
| CH7          | 000-255 | Sound Activation                  |
| CH8          | 000-255 | Color Effect                      |
| CH9          | 000-255 | RED (0%-100%)                     |
| CH10         | 000-255 | GREEN (0%-100%)                   |
| CH11         | 000-255 | BLUE (0%-1000%)                   |
| CH12         | 000-255 | WHITE (0%-100%)                   |

16 Channel Mode:

| Channel List | Value   | Function                          |
|--------------|---------|-----------------------------------|
| CH1          | 000-255 | Pan (0-630*)                      |
| CH2          | 000-255 | Pan Fine (Least significant bit)  |
| CH3          | 000-255 | Tilt (0-240*)                     |
| CH4          | 000-255 | Tilt Fine (Least significant bit) |
| CH5          | 000-255 | Pan & Tilt Speed                  |
| CH6          | 000-255 | Pan & Tilt Auto Run               |
| CH7          | 000-255 | Auto Run Speed                    |
| CH8          | 000-255 | Auto Run Color Open               |
| CH9          | 000-255 | Dimmer (0%-100%)                  |
| CH10         | 000-255 | Strobe                            |
| CH11         | 000-255 | Red (0%-100%)                     |
| CH12         | 000-255 | Green (0%-100%)                   |
| CH13         | 000-255 | Blue (0%-100%)                    |
| CH14         | 000-255 | White (0%-100%)                   |
| CH15         | 000-255 | Color Auto Run                    |
| CH16         | 000-255 | Color Auto Run Speed              |

## 10. DMX512 Connection

1. If you usign a controller with 5 pins DMX output, you need to use a 5 to 3 pin adapter-cable.
2. At last unit, the DMX cable has be terminated with a terminator. Solder a 120ohm 1/4W resistor between pin 2(DMX - ) and pin 3(DMX +) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
3. Connect the unit together in a daisy chain by XLR plug from the output of the unit to the input of the next unit. The cable can not branched or split to a 'Y' cable. DMX512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded conectors can easily distort the signal and shut down the system.
4. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units power is disconnected.
5. Each lighting unit needs to have an address set to receive the data sent by the controller. The address numer is between 0-511 (usualy 0 & 1 are equal to 1).
6. The end of the DMX512 system should be terminated to reduce signal errors.
7. 3 pin XLR connector are more popular than 5 pin XLR  
3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)  
5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+),  
Pin 4/Pin 5: not used

## 11. Troubleshooting

Following are a few common problems that may occur during operation. Hear are some suggestions for easy troubleshooting.

### **A. The unit does not work, no light and the fan does not work.**

- Check the connection of power and main fuse
- Measure the mains voltage on the main connector
- Check the power on LED

### **B. Not responding to DMX controller**

- DMX LED should be on. If not, check DMX connectors, cables to see if link properly
- If the DMX LED is on and no response to the channel, check the address setting and DMX polarity.
- If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
- Tryt to us another DMX controller
- Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

### **C. Some units don't's respond to the easy controller**

- You may have a break in the DMX cabling. Check the LED for the response of the Master/ Slave mode signal.
- Wrong DMX address in the unit. Set the proper address.

**D. No response to the sound**

- Make sur the unit dose not receive DMX Signal
- Check microphone to see if it is good by tapping the microphone

**E. One of the channels is not working well**

- The stepper motor might be damaged or cable connected to PCB is broken
- The motor's drive IC on the PCB might be out of conditio

## **12. Fixture Cleaning**

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's opyics.

- Clean with soft cloth using normal glass cleaning fluid
- Always dry the parts carefully
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.